

Mehdi BOUBNAN

ÉCOLE CENTRALE PARIS · ÉCOLE NORMALE SUPÉRIEURE PARIS-SACLAY - MVA

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Professional Experience

Mindee

Paris, FRANCE

AI ENGINEER - DATA SCIENCE & MACHINE LEARNING ENGINEER

November 2023 - Present

- Overhauled the entire deployment and optimization stack for Machine Learning and Deep Learning models using ONNX and TensorRT for model formats and Triton Server for deployment.
- Redesigned the deployment stack for products code, leveraging FastAPI, RabbitMQ, and Celery for efficient task execution and optimal load distribution.
- Supervised, optimized, and deployed code produced by Data Scientists, conducting load testing with Locust on production-like environments.
- Conducted continuous technology scouting to recommend the best technical stacks for Machine Learning Engineers and Data Scientists.

SENIOR DATA SCIENTIST

November 2022 - November 2023

- Led and mentored a team of three, improving their skills in programming, team collaboration, and internal tool proficiency.
- Optimized machine learning models, ensuring efficient export formats for seamless deployment.
- Designed a standardized GitHub repository template with a pre-configured, secure environment and comprehensive CI/CD pipeline using GitHub Actions.
- Developed internal frameworks, including a geometry module (Shapely-based) and a synthetic data generator (using Pillow and OpenCV) to enhance the team's efficiency.

DATA SCIENTIST

Mars 2020 - Novembre 2022

- Developed multiple Deep Learning models for Computer Vision and NLP (Segmentation, OCR, Transformers, Layout-LM, LLM) using PyTorch and TensorFlow.
- Curated diverse datasets, combining real-world (manually annotated) and synthetic (automatically labeled) datasets for specific use cases like segmentation and OCR.
- Built end-to-end information extraction solutions for various document types, integrating ML models with optimized post-processing algorithms.

Outscale - Ex Fortia Financial Solutions

Paris, FRANCE

MASTER THESIS

May 2019 | 6 months

- Developed an automated financial document generation tool in LaTeX, using Reinforcement Learning (DQN, DPO) to optimize sequence ordering of financial elements.

Société Générale

Paris, FRANCE

DATA SCIENTIST - INTERNSHIP

March 2018 | 6 months

- Created an interactive Python dashboard using Dash for advanced credit database analysis.
- Implemented an anomaly detection algorithm to identify irregularities in credit data.

Total France

Paris, FRANCE

DATA SCIENTIST - INTERNSHIP

September 2017 | 6 months

- Predicted petroleum product sales volumes in France using boosting algorithms (XGBoost).

Education

CentraleSupélec - Ex École Centrale Paris

Paris, FRANCE

ENGINEERING DEGREE - APPLIED MATHEMATICS, MAJOR IN DATA SCIENCE

September 2015 | 4 years

- Cours:** Advanced Machine Learning, Optimization, Advanced Statistics, Deep Learning, Mathematics, Stochastic Processes.

École Normale Supérieure de Cachan

Paris, FRANCE

MASTER OF SCIENCE - MVA (MATHÉMATIQUES, VISION, APPRENTISSAGE)

October 2019 | 1 year

- Cours:** Probabilistic Graphical Models (F.Bach), Computer Vision and Object Recognition (C.Schmid, J.Ponce), Reinforcement Learning (A.Lazaric), Speech and Natural Language Processing (E.Dupoux, B.Sagot).

Lycée Moulay Youssef

Rabat, MOROCCO

PREPARATORY CLASSES - MPSI & MP

September 2013 | 2 years

Projects

DEEP REINFORCEMENT LEARNING APPLIED TO DOOM

[Github Link](#)

- Applied reinforcement learning techniques (DQN, A3C, curiosity-driven exploration) to play various Doom game scenarios.

MARKET PENETRATION PREDICTION

- Developed dynamic models using LSTMs, leveraging low-dimensional customer representations generated via unsupervised clustering to predict market penetration of products.

INCLASS KAGGLE BIRD CLASSIFICATION (RANKED 4TH OUT OF 126)

[Github Link](#)

Languages Technical Skills

Programming Python, Bash, SQL

Machine Learning Frameworks Pytorch, Tensorflow

API & Deployment FastAPI, Celery, RabbitMQ, Redis, Triton Server, ONNX, TensorRT

MLOps & CI/CD Docker, ArgoCD, ClearML, GitHub Actions

Languages French (native), Anglais (fluent)